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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/324,149 06/02/99 WEISS

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008076
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MMC1/0523

EXAMINER

QUARTERMAN, K

ART UNIT

PAPER NUMBER

2879

DATE MAILED:

05/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/324,149

Applicant(s)

WEISS ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhargava (USPN 5455489).
3. Bhargava discloses a display device with a phosphor screen comprising nanocrystals (Column 1, Lines 61-63) along with a pixel addressing system comprising row addressing voltages and column addressing voltages (Column 8, Lines 30-54).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava in view of Yagyu (USPN 5856814).
6. Regarding claims 2-6, 10-13, and 20, Bhargava discloses the claimed invention except for the pixel addressing system having a backlight source.

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7. Yagyu, in the analogous art of driving methods for display devices, teaches that it is known to provide light sources that may include blue light and laser light sources as set forth at Column 6, Lines 50-58.

8. Therefore, it would have been obvious to a person having ordinary skill in the art to provide the light sources of Yagyu in the display device of Bhargava for producing a luminescent color pattern of pixels.

9. Regarding claims 7-9, Bhargava discloses the claimed invention except for the display apparatus having a liquid crystal modulator, an analyzer, and polarizer.

10. Yagyu teaches that it is known to provide a liquid crystal modulator in display devices as set forth at Column 7, Lines 7-15. Yagyu also teaches that it is known to provide an analyzer and a polarizer in the device (Column 13, Lines 17-53).

11. Therefore, it would have been obvious to a person having ordinary skill in the art to provide the modulator, analyzer, and polarizer of Yagyu in the device of Bhargava for modulating, analyzing, and polarizing the light signals of the light source.

12. Claims 2-3 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava in view of Jaskie (USPN 5442254).

13. Bhargava discloses all of the limitations of claim 1 as stated above but fails to exemplify a backlight source and the nanocrystals being formed on a transparent plate.

14. Jaskie, in the analogous art of fluorescent devices, shows nanocrystals on a transparent plate in Figure 2. Jaskie also discloses ultraviolet light as a backlight source for stimulating the nanocrystals (Column 1, Lines 23-28).

15. Therefore, it would have been obvious to a person having ordinary skill in the art to form the nanocrystals on a transparent plate and use ultraviolet light as taught by Jaskie in the device of Bhargava for addressing pixels associated with the nanocrystals.

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava (USPN 5455489) in view of Bhargava (USPN 5422489).

17. Bhargava (5455489) discloses all of the limitations of claim 1 as stated above but fails to exemplify a filter placed over the nanocrystal array.

18. Bhargava (USPN 5422489), in the analogous art of light emitting devices, discloses a glowing device having a nanocrystal layer with a filter for transforming radiation into the desired spectrum region (Column 1, Last Paragraph).

19. Therefore, it would have been obvious to a person having ordinary skill in the art to place a filter over the nanocrystal array as taught by Bhargava (USPN 5422489) in the device of Bhargava (USPN 5455489) for filtering light to produce a desired display.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ligthart et al., USPN 5811921, discloses a thin panel having a resistive spacer plate. De Zwart et al., USPN 5994828, discloses a picture display device with addressing system. Downing, USPN 5764403, discloses a panel display using two-frequency upconversion fluorescence. Spitler et al., USPN 5958573, discloses an electroluminescent device having a structured particle electron conductor. Thompson et al., USPN 6045930, discloses materials for multicolor light emitting diodes.

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C ntact Informati n

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (703) 308-6546. The examiner can normally be reached on M-F (8-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kevin Quarterman
Examiner
Art Unit 2879



Nimesh Patel
Supervisory Patent Examiner
Art Unit 2879

kq 
May 17, 2001